



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/786,055

02/26/2004

Atsushi Watanabe

392.1876

3299

21171

7590

05/21/2007

STAAS & HALSEY LLP

SUITE 700

1201 NEW YORK AVENUE, N.W.

WASHINGTON, DC 20005

EXAMINER

MARC, MCDIEUNEL

ART UNIT

PAPER NUMBER

3661

MAIL DATE

DELIVERY MODE

05/21/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/786,055	<b>Applicant(s)</b> WATANABE ET AL.	
	<b>Examiner</b> McDieunel Marc	<b>Art Unit</b> 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-4 are presented for examination.
2. The rejection to claims 1-4 under 35 U.S.C. 103(a) as being unpatentable over **Jyumonji** (U.S. Pat. No. 5,987,591) in view of **Watanabe et al.** (U.S. Pat. No. 5,980,082) is **maintained**.

#### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jyumonji** (U.S. Pat. No. 5,987,591) in view of **Watanabe et al.** (U.S. Pat. No. 5,980,082).

As per claim 1, **Jyumonji** teaches a robot having a taught position modification device for correcting positions of taught points in an operation program of a robot prepared by an offline programming system, using a visual sensor arranged at a movable part of the robot (see figs. 1 and 4), said device comprising:

determining means for determining a position or an orientation of an object of operation based on positions of at least two characteristic points on an image of the object captured by the visual sensor (see fig. 3); correction means for correcting the positions of the taught points in the operation program based on the determined position or orientation of the object (see figs. 5 or 9, particularly element R5);

moving means for moving an operation tool or a position correction tool attached to an distal of an arm of the robot at the corrected positions of the taught points (see figs. 5 or 9, particularly element R5); setting means for setting a jog-feed coordinate system with respect to the corrected positions of the taught points using information from the offline programming system (see figs. 5-8); although Jyumonji teaches jog-feed however watanabe et al. covers the remaining limitations below stronger than Jyumonji.

**Watanabe et al.** teaches a robot control movement device having a jog control unit in combination with a teaching pendant which being considered as a modification means for modifying the corrected positions of the taught point in the operation program based on positions of a control point of the operation tool or the position correction tool (see fig. 1 element 3 and fig. 2, element 40 or fig. 4), at which positions or orientations of the operation tool or the

Art Unit: 3661

position correction tool are designated by jog feeds using the jog-feed coordinate system such that the control point takes objective positions for the taught points (see fig. 4).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Jyumonji's robot with Watanabe's et al. robot, because this modification would have introduce a stronger jog-feed feature into Jyumonji's robot, thereby improving efficiency and the reliability of the taught position modification device as a whole.

As per claim 2, **Watanbe et al.** in combination with Jyumonji further comprising display means for displaying an image of a model of the object based on information from the offline programming system, and for indicating coordinate axes of the jog-feed coordinate system in accordance with lines defined by the corrected positions of the taught points in the image of the model (see Watanabe's et al. fig. 3, particularly element 40 and fig. 4).

As per claim 3, **Watanbe et al.** in combination with Jyumonji teaches a robot wherein said modification means modifies the positions of subsequent taught points in accordance with modification of one of the taught point each time when the position of the one taught points is modified (see Watanabe's et al. fig. 3).

As per claim 4, **Watanbe et al.** in combination with Jyumonji teaches a robot wherein said moving means moves the operation tool or the position correction tool to the position of the subsequent taught point which is modified in accordance with the modification of the one taught point (see Watanabe's et al. figs. 1-3), on demand of an operator (see Watanabe's et al. fig. 4, bear in mind the pendant being use an operator, wherein "on demand" being taken as input command).

*Response to Arguments*

As to the reference not teaching a jog-feed coordinate system that is set with respect to corrected positions of taught points using information from an offline programming system (see Watanabe's et al. fig. 3, particularly element 40 and fig. 4), note that Watanabe discloses a robot movement control device in which a teaching point is set in a robot movement control program is corrected to another position using jog-feed buttons, which stand for "corrected positions of taught points". It is also noted that the robot tool is moved by jog-feed buttons using a jog-feed command unit toward a position to which a teaching point is to be corrected. Also, Watanabe discusses that a teaching-point directional movement control means monitors a position of the robot moved by jog-feed, determines the teaching point located nearest to the position of the robot and instructs the jog-feed control means to shift the robot, when it approaches any teaching point in the movement command program, to the teaching point located nearest to the position of the robot. Moreover, the position of the tool center point of the robot 4 is monitored in the jog-feed and when the robot 4 is moved to approach any of the taught points, the tool center point is automatically moved to a taught point located nearest the monitored position of the tool center point.

6. Applicant's arguments filed 3/13/2007 have been fully considered but they are not persuasive.


Art Unit: 3661

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to McDieunel Marc whose telephone number is (571) 272-6964.

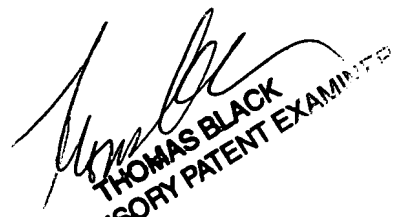
The examiner can normally be reached on 6:30-5:00 Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
McDieunel Marc  
Examiner  
Art Unit 3661

Tuesday, May 08, 2007  
MM/

  
THOMAS BLACK  
SUPERVISORY PATENT EXAMINER